In the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application. Currently amended claims are shown with additions underlined and deletions in ~~strikethrough~~ text or double brackets. No new matter is added by these amendments.

1-9. (Canceled)

10. (Previously Presented) An optical communication system for transmitting a soliton or substantially soliton pulse, comprising

a plurality of dispersion elements, each dispersion element from the plurality of dispersion elements including at least a fiber length and a discrete dispersion compensator, the fiber length and discrete compensator having different dispersions, wherein the path average dispersion of the plurality of dispersion elements is anomalous.

11-42. (Canceled)

43. (Previously Presented) An optical communication system comprising

a plurality of sections, each section including at least two dispersion elements that have dispersions of opposite sign, wherein the plurality of sections permits propagation of a stable or quasi-stable optical pulse, and wherein the optical pulse has a time-bandwidth product greater than a time-bandwidth product of an optical pulse that is Gaussian in shape.

44. (Previously Presented) The optical communication system of claim 43, wherein the optical pulse alternately expands and compresses as it propagates through the sections.

45. (Previously Presented) The optical communication system of claim 43, wherein the path average dispersion of the plurality of sections is zero or anomalous.

46. (Canceled)

47. (Previously Presented) The optical communication system of claim 43, wherein the difference between the dispersion magnitudes of the two dispersion elements is less than 12 ps^2/Km.

48. (Previously Presented) The optical communication system of claim 47, wherein the difference between the dispersion magnitudes of the two dispersion elements is less than 4 ps^2/Km.

49. (Previously Presented) The optical communication system of claim 48, wherein the difference between the dispersion magnitudes of the two dispersion elements is less than 0.1 ps^2/Km.

50. (Previously Presented) The optical communication system of claim 43, wherein the two dispersion elements of a section comprise an optical fiber length and a discrete dispersion compensator.

51. (Canceled)

52. (Previously Presented) The optical communication system of claim 10, wherein the discrete dispersion compensator is fabricated from a highly dispersive material.

53. (Currently Amended) The optical communication system of claim 10 [11], wherein at least one of the discrete dispersion compensators is fabricated from a highly dispersive material.

54. (Previously Presented) The optical communication system of claim 10, wherein the soliton or substantially soliton pulse has a time-bandwidth product greater than the time-bandwidth product of a Gaussian-shaped pulse.

55. (Currently Amended) The optical communication system of claim 10 [11], wherein the soliton or substantially soliton pulse has a time-bandwidth product greater than the time-bandwidth product of a Gaussian-shaped pulse.

56. (Previously Presented) A method of optical communication comprising:

generating a plurality of optical pulses; and

launching the plurality of optical pulses through an optical communication system comprising a plurality of dispersion elements, each dispersion element from the plurality of dispersion elements including at least a fiber length and a discrete dispersion compensator, the fiber length and the discrete dispersion compensator having different dispersions, wherein the path average dispersion of the plurality of dispersion elements is zero or anomalous, such that the optical pulses are transmitted as soliton or substantially soliton pulses.

57. (Canceled)

58. (Previously Presented) A method of optical communication comprising:

generating a plurality of optical pulses; and

launching the plurality of optical pulses through an optical communication system comprising a plurality of sections, each section including at least two dispersion elements that have dispersions of opposite sign, wherein the plurality of sections permits propagation of corresponding stable or quasi-stable optical pulses, and wherein the stable or quasi-stable optical pulses have a time-bandwidth product greater than a time-bandwidth product of optical pulses that are Gaussian in shape.